

What is claimed is:

1. A method for managing messaging platforms on a messaging network, the method comprising the steps of:
- maintaining a messaging platform profile for a messaging platform on the messaging network in a master profile table, said messaging platform profile including a host ID, an area of operation, an operational status, and a token pool;
- storing a version of said master profile table in a global profile table held by each messaging platform on the messaging network;
- monitoring a messaging platform on the messaging network;
- updating said master profile table in response to said step of monitoring;
- updating said global profile table held by each messaging platform in response to said step of updating said master profile table, ensuring version consistency between said master profile table and each of said global profile tables; and
- using said operational status to determine whether a messaging platform may request delivery of a user message via the messaging network at an area of operation supported by a remote messaging platform.
2. The method in claim 1, further including a step of providing a new messaging platform on the messaging network with an initial token pool amount.
3. The method in claim 2, further including a step of deducting a number of

tokens from said token pool held by an originating messaging platform, said originating messaging platform requesting delivery of a user message which requires delivery by a remote messaging platform at an area of operation not supported by said originating messaging platform.

5           4.     The method in claim 2, further including a step of incrementing by a number of tokens said token pool held by a messaging platform, wherein said messaging platform has been requested by an originating messaging platform to deliver a user message.

10           5.     The method in claim 2, wherein said initial token pool amount differs between at least two messaging platforms on the messaging network.

15           6.     The method in claim 2, further including a step of replenishing a messaging platform on the messaging network with a specified number of tokens when said token pool falls below a selected threshold.

          7.     The method in claim 1, further including a step of replenishing a messaging platform on the messaging network with a specified number of tokens upon request by said messaging platform.

          8.     A method for maintaining a messaging network having a master platform and at least one messaging platform, the master platform having a master global

routing table and each messaging platform having a global routing table, the master global routing table and each global routing table each holding a messaging platform entry for each messaging platform on the messaging network, each messaging platform entry having a host ID, an area of operation, an operational status, and a token pool, the method comprising the steps of:

responding to each messaging platform on the messaging network that sends a HELLO message to the master platform, said HELLO message sent by each messaging platform at a selected interval which is defined in the messaging platform entry corresponding to each messaging platform;

sending a QUERY message to a messaging platform on the messaging network that fails to send a HELLO message to the master platform within said selected interval;

updating a messaging platform entry of said messaging platform in the master global routing table and the global routing table of each messaging platform on the messaging network, if said messaging platform fails to respond to said QUERY message, said step of updating setting an operational status within said messaging platform entry to indicate a disabled status; and

using said operational status of a remote messaging platform to determine whether said messaging platform may send a user message using the messaging network to said remote messaging platform for delivery to an area of operation supported by said remote messaging platform.

9. The method of claim 8, further including the steps of:

providing the token pool of each messaging platform with an initial amount of tokens;

debiting a debit amount from the token pool of a messaging platform that requests delivery of a user message at an area of operation supported by a remote messaging platform; and

incrementing a credit amount to the token pool of said remote messaging platform in response to the delivery of said user message within said area of operation by said remote messaging platform.

10. The method of claim 9, further including a step of updating a messaging platform entry of a messaging platform to have a disabled operation status in response to said messaging platform having a token pool amount that falls below a selected threshold.

11. A method for managing a messaging network having at least one messaging platform with each messaging platform having a global profile table, the method comprising the steps of:

responding to an add request by creating a new messaging platform profile, said new messaging platform profile corresponding to a new messaging platform on the messaging network and including a host ID, an area of operation, an operational status, and a token pool which correspond to said new messaging platform profile;

including said new messaging platform profile in a master profile table, said

master profile table having a messaging platform profile for each messaging platform existing on the messaging network;

providing a network address of a master platform to said new messaging platform;

providing said master profile table to said new messaging platform when said new messaging platform establishes a network connection; and

updating the global profile table in each existing messaging platform on the messaging network to include said new messaging platform profile.

12. The method of claim 11, further including the steps of:

determining whether a messaging platform on the messaging network has a non-operational status by using a messaging platform profile which corresponds to the messaging platform;

routing a status message to a master platform in response to said messaging platform having said non-operational status;

storing said status message in a storage location corresponding to said messaging platform, said storage location provided by said master platform; and

delivering said status message stored in said storage location to the messaging platform when said messaging platform has an in-operation status.

13. The method of claim 12, further including a step of sending a confirmation message to an originating messaging platform which sent said status message when said master platform delivers said status message to said messaging platform

having said dial-up connection.

14. The method of claim 11, further including a step of responding to a messaging platform on the messaging network that sends a HELLO message, said HELLO message sent by said messaging platform at a selected interval which is defined in the messaging platform profile of said messaging platform.

15. The method of claim 14, further including a step of sending a QUERY message to a messaging platform on the messaging network that fails to send a HELLO message within said selected interval.

16. The method of claim 15, further including a step of updating a messaging platform profile of a messaging platform that fails to respond to a QUERY message, said step of updating setting an operational status within said platform profile to indicate a disabled status.

17. The method of claim 11, further including a step of updating a messaging platform profile of a messaging platform to have a disabled operation status in response to said messaging platform having a token pool amount that falls below a selected threshold.

18. The method of claim 11, further including a step of deleting a messaging platform profile of a messaging platform in response to a DELETE message.

19. A method of routing a message to a messaging platform on a messaging network, the method comprising the steps of:

determining whether the messaging platform has a non-operational status by using a messaging platform profile which corresponds to the messaging platform;

routing said message to a master platform in response to the messaging platform having said non-operational status;

storing said message in a storage location corresponding to the messaging platform, said storage location provided by said master platform; and

delivering said message stored in said storage location to the messaging platform when the messaging platform has an in-operation status.

20. The method of claim 19, wherein said step of determining includes using an operation schedule defined for the messaging platform in said messaging platform profile.

21. The method of claim 19, wherein said messaging platform profile is stored in a global profile table, said global profile table being available to every messaging platform on the messaging network.

22. A method for providing information to a subscriber on a messaging system,

the method comprising the steps of:

providing a mailbox ID and service information to a messaging platform, said mailbox ID corresponding to a subscriber serviced by said messaging platform and said service information including an information type, a delivery period, and a delivery format;

sending a request to a master platform in response to said service information, said master platform responding to said request by requesting information from an information source, said information corresponding to said service information;

sending information received from said information source to said messaging platform;

converting information received from said information source into a delivery format corresponding to said delivery format selected in said step of providing service information; and

providing said information to a subscriber when said subscriber accesses a mailbox corresponding to said mailbox ID.

23. The method in claim 22, further including the step of maintaining a master profile table, said master profile table having a messaging platform profile for each messaging platform established on the messaging network, said messaging platform profile including a host ID, an area of operation, an operation schedule, and a token pool.



24. The method in claim 22, wherein said delivery format includes a fax delivery format.
25. The method in claim 22, wherein said delivery format includes a voice delivery format.
- 5 26. The method in claim 22, wherein said delivery format includes an email format.
27. The method of claim 22, wherein said master platform forwards said information received from said information source to said messaging platform only when said messaging platform has an in-operation status.
- 10 28. The method of claim 27, where said in-operation status is based on said operation schedule defined for said messaging platform.
29. The method of claim 22, wherein said master platform delays sending said information received from said information source to said messaging platform when said messaging platform has a non-operational status.
- 15 30. The method of claim 29, wherein said non-operational status is obtained when said token pool falls below a selected threshold.

5 31. The method of claim 22, where said master platform converts said information received from said information source into an email format and sends said email formatted information to a mailbox supported by a messaging platform that corresponds to said mailbox ID, if an email format has been chosen as said delivery format.

10 32. A system for managing messaging platforms on a messaging network, the system comprising:

20 33 means for maintaining a messaging platform profile for each messaging platform on the messaging network in a master profile table, said messaging profile including a host ID, an area of operation, an operational status, and a token pool, said means for maintaining also maintain a current version of said master profile table in a global profile table held by each messaging platform on the messaging network;

35 means for monitoring each messaging platform on the messaging network;

40 means for updating said master profile table responsive to said means for monitoring;

45 means for updating said global profile table held by each messaging platform responsive to said means for updating said master profile table, ensuring version consistency between said master profile table and each of said global profile tables; and

50 means for using said operational status to determine whether a messaging platform may request delivery of a user message via the messaging network at an

area of operation supported by a remote messaging platform.

33. The system in claim 32, further including means for providing a new messaging platform on the messaging network with an initial token pool amount.

34. The system in claim 33, further including means for deducting a number of tokens from said token pool held by an originating messaging platform, said originating messaging platform requesting delivery of a user message which requires delivery by a remote messaging platform at an area of operation not supported by said originating messaging platform.

35. The system in claim 33, further including means for incrementing by a number of tokens said token pool held by a messaging platform, wherein said messaging platform has been requested by an originating messaging platform to deliver a user message.

36. The system in claim 33, wherein said initial token pool amount differs between at least two messaging platforms on the messaging network.

37. The system in claim 32, further including means for replenishing a messaging platform on the messaging network with a specified number of tokens when said messaging platform falls below a selected token pool amount.

38. The system in claim 32, further including means for replenishing a messaging platform on the messaging network with a specified number of tokens upon request by said messaging platform.

39. A system for maintaining a messaging network having at least one messaging platform, the system comprising:

a master platform having a master global routing table which holds a messaging platform entry for each messaging platform on the messaging network, each messaging platform entry having a host ID, an area of operation, an operational status, and a token pool;

a global routing table for each messaging platform, wherein said global routing table holds a messaging platform entry for each messaging platform on the messaging network, each messaging platform entry having a host ID, an area of operation, an operational status, and a token pool;

wherein said master platform responds to each messaging platform on the messaging network that sends a HELLO message to said master platform, said HELLO message sent by each messaging platform at a selected interval which is defined in the messaging platform entry corresponding to each messaging platform;

wherein said master platform sends a QUERY message to a messaging platform on the messaging network that fails to send a HELLO message to the master platform within said selected interval;

wherein said master platform updates said operational status of said

messaging platform entry to include a disabled status, said messaging platform entry corresponding to said messaging platform in said master global routing table and said global routing table of each messaging platform on the messaging network, if said messaging platform fails to respond to said QUERY message; and

5            wherein a messaging platform on the network checks said operational status of a remote messaging platform to determine whether said messaging platform may send a user message using the messaging network to remote messaging platform for to delivery to an area of operation supported by said remote messaging platform.

10           40.    The system of claim 39, wherein said master platform provides said token pool of each messaging platform with an initial amount of tokens; said master platform debits a debit amount from a token pool of an originating messaging platform that requests delivery of a user message at an area of operation supported by a remote messaging platform; and said master platform increments a  
15           credit amount to a token pool of said remote messaging platform in response to the delivery of said user message within said area of operation by said remote messaging platform.

20           41.    The system of claim 40, wherein said master platform updates a messaging platform profile of a messaging platform to have a disabled operation status in response to said messaging platform having a token pool amount that falls below a selected threshold.

42. A system for maintaining a messaging network having at least one messaging platform, each messaging platform having a messaging platform profile, the system comprising:

a master platform which creates a new messaging platform profile in response to an add request, said new messaging platform profile corresponding to a new messaging platform and including a host ID, an area of operation, an operational status, and a token pool;

wherein said master platform includes said new messaging platform profile in a master profile table, said master profile table also including a messaging platform profile for each messaging platform existing on the messaging network;

wherein said master platform provides said master profile table to said new messaging platform when said new messaging platform establishes a network connection; and

wherein said master platform updates each global profile table corresponding to each existing messaging platforms on the messaging network to include said new messaging platform profile.

43. The system of claim 42, wherein said master platform responds to each messaging platform on the messaging network that sends a HELLO message, said HELLO message sent by each messaging platform at a selected interval which is defined in the messaging platform profile of each messaging platform.

44. The system of claim 43, wherein said master platform sends a QUERY message to a messaging platform on the messaging network that fails to send a HELLO message within said selected interval.

45. The system of claim 44, wherein said master platform updates a messaging platform profile of a messaging platform that fails to respond to a QUERY message to indicate a disabled status.

46. The system of claim 42, wherein said master platform updates a messaging platform profile of a messaging platform to have a disabled operation status in response to a messaging platform having a token pool amount that falls below a selected threshold.

47. The system of claim 42, further including means for deleting a messaging platform profile of a messaging platform, said means for deleting responsive to a DELETE message.

48. The system of claim 42, wherein said master platform includes means for receiving a status message destined for a messaging platform having a dial-up connection to the messaging network when said dial-up connection is not established on the messaging network, said master platform further including means for delivering said status message to said messaging platform when said operational period indicates said messaging platform has established a temporary

dial-up connection to the messaging network.

49. The system of claim 48, wherein said master platform sends a confirmation message to an originating messaging platform that sent said status message when said master platform delivers said status message to said messaging platform.

5 50. A system for delivering a status message to a messaging platform, the system comprising:

a first messaging platform;

10 a second messaging platform having a global profile table which includes a messaging platform profile for said first messaging platform, the first messaging platform having a global profile table which includes a messaging platform profile for said second messaging platform, the first messaging platform having means for determining the operational status of said second messaging platform using said messaging platform profile corresponding to said second messaging platform;

15 a master platform having a master profile table which includes a messaging platform profile for said first messaging platform and said second messaging platform, said master platform having means for determining an operational status of said first and second messaging platforms; and

20 wherein said first messaging platform routes the status message to said master platform in response to said second messaging platform having a non-operational status, said master platform having a storage location for storing the status message and means for delivering the status message to said second



messaging platform, said means for delivering responsive to said means for determining said operational status of said second messaging platform.

51. The system in claim 50, wherein said master platform maintains content consistency between said master profile table and said global profile tables of said first messaging platform and said second messaging platform.

52. A system for delivering information to a subscriber on a messaging system, the system comprising:

a messaging platform having means for receiving a mailbox ID and service information from a subscriber and means for requesting from a master platform information corresponding to said service information, said master platform having means for communicating with an information source, said means for communicating responsive to said means for requesting by requesting information corresponding to said service information from said information source;

wherein said master platform responds to any information received from said information source by sending said information to said messaging platform; and

wherein said messaging platform converts said information to have a delivery format corresponding to a delivery format selected by said subscriber, said messaging platform having means for providing said information in said delivery format to said subscriber when said subscriber accesses a mailbox corresponding to said mailbox ID.

53. The system in claim 52, wherein said service information includes an information type, a delivery period, and a delivery format.

54. The system in claim 52, wherein said delivery format includes a voice delivery format.

55. The system in claim 52, wherein said delivery format includes an email format.

56. The system in claim 52, wherein said delivery format includes a fax format.

57. The system of claim 52, wherein said master platform forwards said information received from said information source to said messaging platform only when said messaging platform has an in-operation status.

58. The system of claim 57, wherein said in-operation status is based on said operation schedule defined for said messaging platform.

59. The system of claim 52, wherein said master platform delays sending said information received from said information source to said messaging platform when said messaging platform has a non-operational status.

60. The system of claim 59, wherein said non-operational status is obtained when said token pool falls below a selected threshold.

61. The system of claim 52, where said master platform converts said information received from said information source into an email format and sends said email formatted information to a mailbox supported by a messaging platform that corresponds to said mailbox ID, if an email format has been chosen as said delivery format.

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